CLAIMS

Claims 1-17 were originally filed. Claims 1 and 17 were previously amended without prejudice or disclaimer of the subject matter therein. Claims 1-17 are currently undergoing prosecution. Herein, Applicant amends claims 1, 2-4, 10 and 17 without prejudice or disclaimer of the subject matter thereof.

In the Claims

1. (Currently Amended) A process for the decolorization of colored effluents using unidentified white-rot fungus NIOCC #2a deposited under accession number MTCC 5159, which comprises:

a) culturing ~~an isolated white-rot fungus strain NIOCC2A~~ the unidentified white-rot fungus NIOCC #2a deposited under accession number MTCC 5159 in a medium prepared with sea water with salinity ranging from 25 to 35 parts per thousand and containing assimilable ~~C and N~~ carbon and nitrogen source for a period of 6 to 12 days to obtain a fungal biomass;

b) separating the fungal biomass from the culture medium of step (a) to obtain a cell-free supernatant;

c) freezing the cell-free supernatant obtained in step (b) for 12 to 24 hours followed by thawing thereof to precipitate the exopolymeric substance (EPS) produced by the fungus;

d) adding methanol to the supernatant obtained in step (c) to further precipitate the remaining EPS;

e) pooling and centrifuging the precipitates obtained in step (c) and (d) to obtain exopolymeric substance and;

f) contacting colored effluents optionally in a diluted form either with the fungal biomass obtained in step (a) or cell-free supernatant obtained in step (b) or the exopolymeric substance as obtained in step (e) ~~(f)~~ for a period ranging from 6 hours to 6 days at temperature ranging from 30 to 60 degree C and pH ranging from 3 to 6 thereby decolorizing said colored effluents.

2. (Currently Amended) A process as claimed in claim 1, wherein the colored effluents are preferably selected from the group consisting of black liquor from paper and pulp industries, molasses spent wash from distilleries, textile dye ~~waste waters~~ wastewaters and synthetic dyes.

3. (Currently Amended) A process as claimed in claim 1, wherein the ~~fungal biomass~~ fungus is cultured for at least 6 days to get maximum decolorization of colored effluents.

4. (Currently Amended) A process as claimed in claim 1, wherein the carbon source used for ~~growing~~ culturing the fungus is preferably selected from glucose, fructose, sorbitol and starch.

5. (Currently Amended) A process as claimed in claim 1, wherein the concentration of the carbon source for ~~growing~~ culturing the fungus is at least 1%.

6. (Currently Amended) A process as claimed in claim 1, wherein the nitrogen source used for ~~growing~~ culturing the fungus is preferably selected from peptone and ammonium tartarate.

7. (Currently Amended) A process as claimed in claim 1, wherein the concentration of the nitrogen source for ~~growing~~ culturing the fungus is at least 0.02%.

8. (Currently Amended) A process as claimed in claim 1, wherein the medium for ~~growing~~ culturing the fungus is preferably prepared with seawater having 25 parts per thousand salinity.

9. (Original) A process as claimed in claim 1, wherein the medium is optionally supplemented with 1% diluted textile mill effluent or copper sulphate at 2 mM concentration.

10. (Currently Amended) A process as claimed in claim 1, wherein the ~~fungal biomass~~ fungus is cultured for a period of at least 6 days.

11. (Original) A process as claimed in claim 1, wherein the dilution of the colored effluents is done in the range of 10 to 20%.

12. (Original) A process as claimed in claim 1, wherein contacting of the colored effluents with fungal biomass is carried out for a period of preferably 2 to 6 days at a temperature preferably 30 degree C and pH preferably 6.0.

13. (Original) A process as claimed in claim 1, wherein contacting of the colored effluents with the cell-free supernatant is carried out for a period of preferably 12 hours at a temperature preferably 60 degree C and pH preferably 6.0.

14. (Original) A process as claimed in claim 1, wherein contacting of the colored effluents with the exopolymeric substance is carried out for a period of preferably 24 hours at a temperature preferably 60 degree C and pH preferably 6.0.

15. (Original) A process as claimed in claim 1, wherein separation of the fungal biomass from the culture medium is carried out preferably by vacuum filtration or centrifugation.

16. (Original) A process as claimed in claim 1, wherein the fungal biomass is preferably immobilized on cubes or sheets of polyurethane foam or any other conventional known immobilization support.

17. (Currently Amended) ~~An isolated~~ A biologically pure culture of the unidentified white-rot fungus ~~fungal strain NIOCC2A~~ NIOCC #2a deposited under accession number MTCC 5159 with the following characteristics:

a) filamentous and non-sporulating; and

~~b)~~ grows as white, fluffy mycelium on malt extract medium; ~~and;~~

~~c) exhibits 99% homology to an unidentified basidiomycete species AY187277;~~